



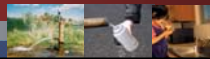
Revised Total Coliform Rule



November 2015

Background & Key Provisions

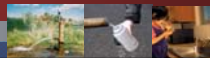
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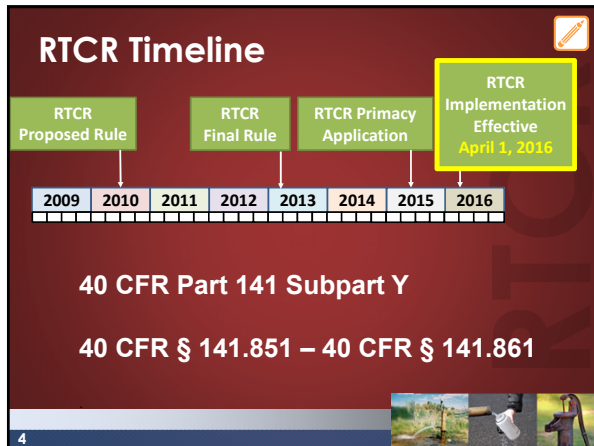


History of 2013 RTR

- Six Year Review 1 – SDWA requires EPA to review and revise, as appropriate, each National Primary Drinking Water Regulation no less often than every six years; In 2003, EPA reviewed and decided to revise the TCR
 - Implementation burden
 - Inadequate application of indicators of pathogenic contamination
- Agreement in Principle – In Sept 2008, Total Coliform Rule Distribution System Advisory Committee deliberations concluded with a signed Agreement in Principle (AIP) that included consensus recommendations on how to revise the TCR.

3





RTCR Applicability

- Like 1989 TCR, RTCR applies to all PWSs
 - Only microbial drinking water regulation that applies to all PWSs
 - GW & SW systems
 - One of the few rules that applies to TNCWSs
 - Any size PWS population

40 CFR 141.851(b)

5

Questions?

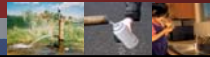
- Why EPA only kept the *E. coli* MCL violation and changed the coliform MCL to a Treatment Technique Trigger?
- Why EPA is no longer using fecal coliform as an indicator?

6

Why Total Coliform & *E. coli*?

- RTRC uses TC & *E. coli* as indicators of potential risk
 - TC are a group of closely related bacteria that, with a few exceptions, are not harmful to humans
 - *E. coli* bacteria are a more accurate indicator of fecal contamination than TC, though not a measure of waterborne pathogen occurrence
- The presence of TC is a good indicator of a potential pathway of microbial contamination into the distribution system

7



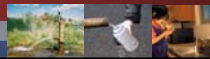
Key Provisions

MCL

- Establishes an *E. coli* MCL

<i>E. coli</i> MCL Violation Occurs with Any of These Sampling Result Combinations	
ROUTINE	REPEAT
EC+	TC+
TC+	EC+
EC+	Any missing repeat sample
TC+	TC+ (but no <i>E. coli</i> analyzed)

8

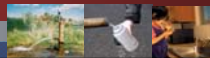


Key Provisions

Treatment Technique Triggers (Assessments)

- Replaces monthly Total Coliform MCL with Treatment Technique Trigger
 - Level 1 and Level 2 Assessments
 - Corrective Actions
- Treatment Technique Triggers also invoked in situations where systems experience *E. coli* MCL or fail to conduct all repeat monitoring

9



Key Provisions

Monitoring

- Samples collected based on a written sample siting plan
- ROUTINE sample frequency and number based on system type and population served
- Reduced monitoring available for ground water systems serving $\leq 1,000$; stringent criteria to qualify and stay on
 - Examples
 - Clean compliance history
 - Free of sanitary defects/on schedule for correcting defects
 - Protected source water
 - Meets approved construction standards
 - Compliance with operator certification requirements
 - Annual site visit by state/Level 2 Assessment

10

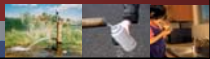


Key Provisions

Monitoring

- Small ground water systems with problems must monitor more frequently
- Systems not conducting ROUTINE monitoring monthly must collect 3 ADDITIONAL ROUTINE samples the month following 1 or more TC+ samples
 - State may waive requirement for additional routine samples

11

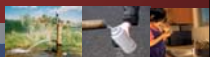


Key Provisions

Monitoring

- 3 REPEAT samples required for each ROUTINE TC+ result
 - Location: original site, within 5 connections upstream, within 5 connections downstream, or alternative sites
 - Additional set of REPEATS for each REPEAT TC+ result, until reaching Treatment Technique Trigger (Level 1 or Level 2 Assessment) or until all repeats are TC-
- Any sample that is TC+ must be further tested for *E. coli*

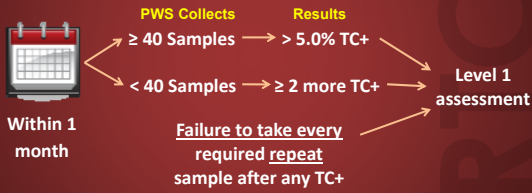
12



Key Provisions

Monitoring

- Results of all ROUTINE and REPEAT sampling included in determination of whether an Assessment is triggered.

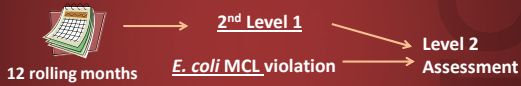


13

Key Provisions

Monitoring

- Results of all ROUTINE and REPEAT sampling included in determination of whether an Assessment is triggered.



14

Key Provisions

Assessment and Corrective Action

- PWSs required to investigate the system and correct any sanitary defects found when monitoring results (or failure to monitor) show the system may be vulnerable to contamination
- Systems must conduct a basic self assessment (Level 1) or a more detailed assessment by a qualified party (Level 2) depending on the severity and frequency of contamination or failure to monitor
- Failure to assess and correct is a Treatment Technique (TT) violation

15

Key Provisions

Seasonal Systems

- Defines "seasonal systems" and requires them to have start-up procedures and sampling during high vulnerability periods

Public Notification (PN)

- Notify public within 24 hours if system confirms fecal contamination (E. coli)
- Notify public within 30 days if system does not investigate and fix the identified problem (replaces the PN for total coliform MCL violations, reducing system costs and consumer confusion)
- Notify public yearly regarding monitoring, reporting and recordkeeping violations (for CWSS, via the Consumer Confidence Report (CCR))

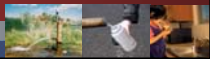
16



RTCR Purpose

- **TCR & RTCR Objectives:**
 - Evaluate effectiveness of treatment
 - Determine integrity of distribution system
 - Signal possible presence of microbial contamination
- RTCR improves public health protection by reducing the pathways through which fecal contamination and pathogens can enter the distribution system
- Cost-effective way to enhance multi-barrier approach to public health protection

17



State Implementation – Key Aspects

- Consider process for updating sample siting plans
- Evaluate system qualification for reduced monitoring and triggers for return to baseline or increased
- Develop and implement procedures for Level 1 and Level 2 Assessments and corrective action
- Ensure seasonal systems are completing their start-up procedures and monitoring

18

